



Targeted Constituents

! Significant Benefit		™ Partial Benefit		" Low or Unknown Benefit	
" Sediment	" Heavy Metals	" Floatable Materials	" Oxygen Demanding Substances		
" Nutrients	™ Toxic Materials	" Oil & Grease	" Bacteria & Viruses	" Construction Wastes	

Implementation Requirements

! High		™ Medium		" Low	
" Capital Costs	" O & M Costs	™ Maintenance	" Suitability for Slopes >5%	™ Training	

Description

Prevent or reduce the discharge of pollutants to stormwater from hazardous waste through proper material use, waste disposal, and training of employees and subcontractors. This management practice is likely to create a partial reduction in toxic materials.

Approach

Many of the chemicals used on-site can be hazardous materials which become hazardous waste upon disposal. These wastes may include:

- # Paints and solvents;
- # Petroleum products such as oils, fuels, and grease;
- # Herbicides and pesticides;
- # Acids for cleaning masonry; and
- # Concrete curing compounds.

In addition, sites with existing structures may contain wastes which must be disposed of in accordance with Federal, State, and local regulations. These wastes include:

- # Sandblasting grit mixed with lead-, cadmium-, or chromium-based paints;
- # Asbestos; and
- # PCBs (particularly in older transformers).

The following steps will help reduce stormwater pollution from hazardous wastes:

Material Use

- # Use all of the product before disposing of the container.
- # Do not remove the original product label, it contains important safety and disposal information.
- # Material Safety Data Sheets should be provided for each product being handled. All persons using or handling the product should be made aware of the safety information and the location of the readily available Material Safety Data Sheets.
- # Do not over-apply herbicides and pesticides. Prepare only the amount needed. Follow the recommended usage instructions. Over-application is expensive, environmentally harmful and generally doesn't provide the intended additional benefit. Apply surface dressings in several smaller applications, as opposed to one large application, to allow time for infiltration and to avoid excess material being carried off-site by runoff. Do not apply these chemicals just before it rains. People applying pesticides must be trained and certified in accordance with Federal and State regulations.
- # Do not clean out brushes or rinse paint containers into the dirt, street, gutter, storm drain, or stream. "Paint out" brushes as much as possible. Rinse water-based paints to the sanitary sewer. Filter and re-use thinners and solvents. Dispose of excess oil-based paints and sludge as hazardous waste.

Waste Recycling/Disposal

- # Select designated hazardous waste collection areas on-site.
- # Regularly schedule hazardous waste removal to minimize on-site storage.
- # Hazardous materials and wastes should be stored in covered containers and protected from vandalism. They should be stored in the original containers or in other well marked containers.
- # Place hazardous waste containers in secondary containment.

Storage Procedures

- # Ensure that adequate hazardous waste storage volume is available.
- # Ensure that hazardous waste collection containers are conveniently located.
- # Designate hazardous waste storage areas on site, away from storm drains or watercourses.
- # Minimize production or generation of hazardous materials and hazardous waste on the jobsite.
- # Use containment berms in fueling and maintenance areas and where the potential for spills is high.

- # Segregate potentially hazardous waste from nonhazardous construction site debris.
- # Store hazardous materials and wastes in covered containers and protected from vandalism.
- # Keep liquid or semi-liquid hazardous waste in appropriate containers (closed drums or similar) and under cover.
- # Clearly mark on all hazardous waste containers which materials are acceptable for the container.
- # Place hazardous waste containers in secondary containment.
- # Do not allow potentially hazardous waste materials to accumulate on the ground.
- # Do not mix wastes as this can cause unforeseen chemical reactions, make recycling impossible, and complicate disposal.
- # Recycle any useful material such as used oil or water-based paint.
- # Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for non-hazardous construction debris.
- # Arrange for regular waste collection before containers overflow.
- # Make sure that hazardous waste (e.g. excess oil-based paint and sludges) is collected, removed, and disposed of only at authorized disposal areas.
- # For a quick reference on disposal alternatives for specific wastes, see the table presented in the Employee/Subcontractor Training BMP fact sheet.

Training

- # Educate employees and subcontractors on hazardous waste storage and disposal procedures.
- # Educate employees and subcontractors of potential dangers to humans and the environment from hazardous wastes.
- # Instruct employees and subcontractors on safety procedures for common construction site hazardous wastes.
- # Instruct employees and subcontractors in identification of hazardous and solid waste.
- # Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings).
- # Designate a foreman or supervisor to oversee and enforce proper solid waste

management procedures and practices.

- # Make sure that hazardous waste is collected, removed, and disposed of only at authorized disposal areas.
- # Train employees and subcontractors in proper hazardous waste management including review of material safety data sheets.
- # Warning signs should be placed in areas recently treated with chemicals.
- # Place a stockpile of spill cleanup materials where it will be readily accessible.
- # If a container does spill, clean up immediately.

Maintenance

- # Inspect hazardous waste receptacles and area regularly.
- # Arrange for regular hazardous waste collection.

Limitations

- # This practice is not intended to address site-assessments and pre-existing contamination.
- # Major contamination, large spills, and other serious hazardous waste incidents require immediate response from specialists.
- # Demolition activities and potential pre-existing materials, such as asbestos, are not addressed by this program.
- # Hazardous waste that cannot be reused or recycled must be disposed of by a licensed hazardous waste hauler.

**Primary
References**

California Storm Water Best Management Practice Handbooks, Construction and Industrial Handbooks, CDM et.al. for the California SWQTF, 1993.

Caltrans Storm Water Quality Handbooks, CDM et.al. for the California Department of Transportation, 1997.

**Subordinate
References**

Blueprint for a Clean Bay-Construction-Related Industries: Best Management Practices for Storm Water Pollution Prevention; Santa Clara Valley Nonpoint Source Pollution Control Program, 1992.

Processes, Procedures, and Methods to Control Pollution Resulting from all Construction Activity; USEPA, 430/9-73-007, 1973.

Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92005; USEPA, April 1992.